

5. (Amended) Composition for storing heat according to Claim 2, characterized in that one heat storage material comprises mixed crystals of different dialkylammonium salts.

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6. (Amended) Composition for storing heat according to Claim 2, characterized in that one heat storage material comprises a compound from the group consisting of diethylammonium chloride, dipropylammonium chloride, dibutylammonium chloride, dipentylammonium chloride, dihexylammonium chloride, dioctylammonium chloride, didecylammonium chloride, didodecylammonium chloride, dioctadecylammonium chloride, diethylammonium bromide, dipropylammonium bromide, dibutylammonium bromide, dipentylammonium bromide, dihexylammonium bromide, dioctylammonium bromide, didecylammonium bromide, didodecylammonium bromide, dioctadecylammonium bromide, diethylammonium nitrate, dipropylammonium nitrate, dibutylammonium nitrate, dipentylammonium nitrate, dihexylammonium nitrate, dioctylammonium nitrate, didecylammonium nitrate, diundecylammonium nitrate and didodecylammonium nitrate, with particular preference a compound from the group consisting of dioctylammonium chloride, didecylammonium chloride, didodecylammonium chloride, dioctadecylammonium chloride, dihexylammonium bromide, didecylammonium bromide, didodecylammonium bromide, dioctadecylammonium bromide, dihexylammonium nitrate, dioctylammonium nitrate, didecylammonium nitrate, dioctylammonium chlorate, dioctylammonium acetate, dioctylammonium formate, didecylammonium chlorate, didecylammonium acetate, didecylammonium formate, didodecylammonium chlorate, didodecylammonium formate, didodecylammonium hydrogensulfate, didodecylammonium propionate, dibutylammonium-2-nitrobenzoate and didodecylammonium nitrate.

7. (Amended) Composition for storing heat according to Claim 1, characterized in that the heat storage material has an average crystallite size in the range from 0.1 to 1000 μm , preferably in the range from 1 to 100 μm , and the material is insoluble in water.

8. (Amended) Composition for storing heat according to Claim 1, characterized in that in the application range the heat storage material has a solid/solid phase transition which has an enthalpy of at least 50 J/g, preferably at least 80 J/g, and with particular preference at least 150 J/g.

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9. (Amended) Composition for storing heat according to Claim 1, characterized in that in the application range the heat storage material has a solid/solid phase transition which lies within the temperature range between -100°C and 150°C, preferably in the temperature range from -50°C to 100°C, and with particular preference in the temperature range from 0°C to 90°C.

10. (Amended) Composition for storing heat according to Claim 1, characterized in that at least one auxiliary comprises a substance or preparation having good thermal conductivity, in particular a metal powder or metal granules or graphite, the heat storage material preferably being in a state of intimate mixture with the auxiliary, in the form of a loose bed or in the form of shaped bodies.

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12. (Amended) Composition for storing heat according to Claim 1, characterized in that at least one auxiliary comprises a binder, preferably a polymeric binder, with the crystallites of the heat storage material preferably being in a state of fine distribution in the binder.

16. (Amended) Composition for storing heat according to Claim 1, characterized in that the polymeric binder is selected from curable polymers or polymer precursors which are preferably selected from the group consisting of polyurethanes, nitrile rubber, chloroprene, polyvinyl chloride, silicones, ethylene-vinyl acetate copolymers and polyacrylates.

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17. (Amended) Composition for storing heat according to Claim 1, characterized in that the composition is present in the form of an open-celled or closed-celled foam, with the auxiliary, which is preferably a polymer, forming the matrix of the foam in which the crystallites of the heat storage material are present in a state of fine distribution.

23. (Amended) Use of compositions according to Claim 10 in devices for cooling electronic components.

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